

MSEA – Metasys® System Extended Architecture

NAE

Network Automation Engine

Network Automation Engines (NAEs) enable Internet Protocol (IP) connectivity and Web-based access to Metasys® Building Management Systems (BMSs).

NAEs leverage standard building management communication technologies, including BACnet® protocol, LONWORKS® network, and N2 Bus protocol to monitor and supervise a wide variety of Heating, Ventilating, and Air Conditioning (HVAC); lighting; security; fire; and access control equipment.

NAEs provide comprehensive equipment monitoring and control, scheduling, alarm and event management, energy management, data exchange, data trending, and data storage.

NAEs feature an embedded Site Management Portal user interface, support multiple concurrent Web browser sessions with password and permission access control, and provide the protection of industry standard Information Technology (IT) security.

NAE55 models support a comprehensive set of supervisory features and functions for large facilities and technically advanced buildings and complexes.

The NAE35/NAE45 models enable cost-effective NAE connectivity and control in smaller facilities, and can extend NAE supervisory functions in larger facilities.

The NAE85 is a high-capacity NAE that allows integration of large BACnet IP systems and can take the place of multiple NAEs.

Features

- Communication Using Commonly Accepted IT Standards at the Automation and Enterprise Level
- Web-Based User Interface
- Site Director Function
- Support for Web Services at the Automation Network Level
- User Interface and Online System Configuration Software Embedded in NAE
- Supervision of Field Controller Networks Including BACnet MS/TP, N2 Bus, LONWORKS Network, and BACnet IP Devices
- Multiple Connection Options for Data Access



NAE55 Network Automation Engine



NAE45 Network Automation Engine



NAE85 Network Automation Engine

NAE

Network Automation Engine

NAE35

Ordering Codes	Description
MS-NAE35xx-xxx (Base Features of Each NAE35)	NAE35 Network Automation Engines: Requires a 24 VAC power supply. Each model includes one RS-232-C serial port, one USB serial port, one Ethernet port, and an MS-BAT1020-0 Data Protection Battery.
MS-NAE3510-2	Supports one N2 or BACnet MS/TP (RS-485) trunk; includes an additional RS-232-C serial port for optional external modem; supports up to 50 devices on the N2 or BACnet MS/TP trunk.
MS-NAE3510-2U	Supports one N2 or BACnet MS/TP (RS-485) trunk; includes an additional RS-232-C serial port for optional external modem; supports up to 50 devices on the N2 or BACnet MS/TP trunk. Note: This model is UL Listed, File S4977, UUKL 864 - 9th Edition Smoke Control Equipment.
MS-NAE3511-2	Supports one N2 or BACnet MS/TP (RS-485) trunk (RS-485 port); includes an internal modem; supports up to 50 devices on the N2 or BACnet MS/TP trunk.
MS-NAE3514-2	Supports one N2 or BACnet MS/TP (RS-485) trunk; features Basic Access support; includes an additional RS-232-C serial port for optional external modem; supports up to 50 devices on the N2 or BACnet MS/TP trunk.
MS-NAE3515-2	Supports one N2 or BACnet MS/TP (RS-485) trunk; features Basic Access support; includes an internal modem; supports up to 50 devices on the N2 or BACnet MS/TP trunk.
MS-NAE3520-2	Supports one LonWorks trunk, includes an additional RS-232-C serial port for optional external modem. Supports up to 64 devices on the LonWorks port.
MS-NAE3520-2U	Supports one LonWorks trunk, includes an additional RS-232-C serial port for optional external modem. Supports up to 64 devices on the LonWorks port. Note: This model is UL Listed, File S4977, UUKL 864 - 9th Edition Smoke Control Equipment.
MS-NAE3521-2	Supports one LonWorks trunk, includes an internal modem. Supports up to 64 devices on the LonWorks port.
MS-NAE3524-2	Supports one LonWorks trunk, features Basic Access support, and includes an additional RS-232-C serial port for optional external modem. Supports up to 64 devices on the LonWorks trunks.
MS-NAE3525-2	Supports one LonWorks trunk, features Basic Access support, and includes an internal modem. Supports up to 64 devices on the LonWorks trunks.

Note:

For repair parts, add -702 after the code number.

NAE45

Ordering Codes	Description
MS-NAE45xx-xxx (Base Features of Each NAE45)	NAE45 Network Automation Engines: Requires a 24 VAC power supply. Each model includes one RS-232-C serial port, one USB serial port, one Ethernet port, and an MS-BAT1020-0 Data Protection Battery.
MS-NAE4510-2	Supports one N2 or BACnet MS/TP (RS-485) trunk; includes an additional RS-232-C serial port for optional external modem; supports up to 100 devices on the N2 or BACnet MS/TP trunk.
MS-NAE4510-2U	Supports one N2 or BACnet MS/TP (RS-485) trunk; includes an additional RS-232-C serial port for optional external modem; supports up to 100 devices on the N2 or BACnet MS/TP trunk. Note: This model is UL Listed, File S4977, UUKL 864 - 9th Edition Smoke Control Equipment.
MS-NAE4511-2	Supports one N2 or BACnet MS/TP (RS-485) trunk; includes an internal modem; supports up to 100 devices on the N2 or BACnet MS/TP trunk.
MS-NAE4520-2	Supports one LonWorks trunk, includes an additional RS-232-C serial port for optional external modem; supports up to 127 devices on the LonWorks port.
MS-NAE4520-2U	Supports one LonWorks trunk, includes an additional RS-232-C serial port for optional external modem; supports up to 127 devices on the LonWorks port. Note: This model is UL Listed, File S4977, UUKL 864 - 9th Edition Smoke Control Equipment.
MS-NAE4521-2	Supports one LonWorks trunk, includes an internal modem; supports up to 127 devices on the LonWorks port.

Note:

For repair parts, add -702 after the code number.

NAE

Network Automation Engine

NAE55

Ordering Codes	Description
MS-NAE55xx-x (Base Features of Each NAE55)	NAE55 Network Automation Engines: Requires a 24 VAC power supply. Each model includes two RS-232-C serial ports, two USB serial ports, two RS-485 ports, one Ethernet port, and one MS-BAT1010-0 Data Protection Battery. Supports up to 100 devices on each N2 or BACnet MS/TP trunk.
MS-NAE5510-1	Supports two N2 or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk).
MS-NAE5510-1U	Supports two N2 or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk). Note: This model is UL Listed, File S4977, UUKL 864 - 9th Edition Smoke Control Equipment.
MS-NAE5511-1	Supports two N2 or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk); includes an internal modem.
MS-NAE5512-1	Supports two N2 or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk). Note: MS-NAE5512-1 models support N2 tunneling on N2 trunks (only).
MS-NAE5513-1	Supports two N2 or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk); includes an internal modem. Note: MS-NAE5513-1 models support N2 tunneling on N2 trunks (only).
MS-NAE5520-1	Supports a LonWorks trunk, and two N2 trunks or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk). Supports up to 255 devices on the LonWorks trunk.
MS-NAE5520-1U	Supports a LonWorks trunk, and two N2 trunks or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk). Supports up to 255 devices on the LonWorks trunk. Note: This model is UL Listed, File S4977, UUKL 864 - 9th Edition Smoke Control Equipment.
MS-NAE5521-1	Supports a LonWorks trunk, and two N2 trunks or two BACnet MS/TP (RS-485) trunks (or one N2 trunk and one BACnet MS/TP trunk); includes an internal modem. Supports up to 255 devices on the LonWorks trunk.

Note:

For the European versions of the NAE55 add an E after the code number. For repair parts, add -701 after the code number.

NAE85

Ordering Codes	Description
MS-NIE8500-0 *	NxE85 model with 1U chassis for mounting in a server rack. Note: The NAE85 models ship as MS-NIE8500-0 models. Use the ChangeModel utility in the NxE85 Metasys software to change an NIE85 to an NAE85.
MS-NxE85SW-0	NxE85 software for 10,000 objects (new projects only software).

Note:

* Standard NxE85 models supports 10,000 objects; an upgrade is available to support an additional 15,000 objects.

Accessories

Ordering Codes	Description
MS-BAT1010-0	Replacement data protection battery for NAE55 and NIE55. Rechargeable gel cell battery: 12 V, 1.2 Ah, with a typical life of 3 to 5 years at 21°C (70°F)
MS-BAT1020-0	Replacement data protection battery for NAE35, NAE45, and NCE25. Rechargeable NiMH battery: 3.6 V 500 mAh, with a typical life of 10 years at 21°C (70°F)
MS-15KUPG-0	15,000 object upgrade for NxE85
MS-MULTENGSW-6	Contains ToggleTunnel utility for converting an NAE55/NIE55 to an NAE55 model with the N2 Tunneling features enabled. Not for use with MS-NAE5510-OU or MS-NIE5510-OU.
MS-RAP-0	Ready Access Portal Server provides a user interface that is a natural, complementary extension of the Metasys Site Management Portal user interface. Note: This option is not necessary for sites that have an ADS/ADX that is the Site Director because Ready Access Portal Server is provided with the ADS/ADX solution.
MS-EXPORT-0	Export Utility extracts historical trend, alarm, and audit data from the system and presents the historical data in a variety of formats. Note: This option is not necessary for sites that have an ADS/ADX that is the Site Director because Export Utility is provided with the ADS/ADX solution.
AS-XFR100-1	Power transformer (Class 2, 24 VAC, 92 VA maximum output), with enclosure
AS-XFR010-1	Power transformer (Class 2, 24 VAC, 92 VA maximum output), no enclosure
SC450RM1U (OEM Part No.)	Recommended Uninterruptable Power Supply (UPS) for NxE85 model: American Power Conversion (APC®) Smart-UPS SC 450VA, 280 W 120 VAC input/output with NEMA 5-15R output connections